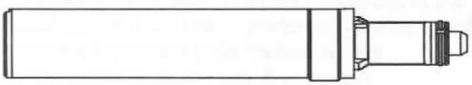
2/04
5400-100-701 Rev-B

CORE

Consolidated Operating Room Equipment

U-Drill

REF 5400-100



CE 0197

US Patents: 5,543,695
5,689,159
5,888,200
5,941,891
6,017,354
6,045,564
6,329,778
6,752,816
and other Patents Pending

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Important Information

File in your maintenance records

Intended Use

The U-Drill is intended for use with the Consolidated Operating Room Equipment (CORE) System. When used with a variety of attachments, the handpiece is intended for surgical procedures involving drilling, reaming, and cutting bone and hard tissue. This handpiece may also be used with the Total Performance System (TPS).

User/Patient Safety*

⚠ WARNINGS:

- Before using this component or any component compatible with this system, read and understand the instructions supplied with each component. Pay special attention to the important User/Patient Safety information. Familiarization with the system components prior to use is important. Failure to comply may result in patient and/or operating room staff injury or damage to components.
- The surgeon performing any procedure is responsible for determining the appropriateness of this instrument and the specific technique for each patient. Stryker, as a manufacturer, does not recommend surgical technique.
- Clean and sterilize handpieces and attachments before first and every use. See the *CORE Cleaning, Maintenance, and Sterilization Recommendations* for care instructions.
- Prior to use, operate the components and inspect for damage. Do not use if damage is apparent.
- All cutting accessories are intended for single use only. Reuse significantly increases wear on the handpiece and attachment. Failure to comply may result in patient and/or operating room staff injury.

*For further information, contact your Stryker Instruments sales representative or Customer Service at 1-800-253-3210. Outside the USA, contact your nearest Stryker subsidiary.

Accessory Information*

A variety of specialized attachments are available for use with the U-Drill. Each specialized attachment is supplied with specific instructions. Only the Straight and Angled Attachments are discussed below.

WARNINGS:

- Use only Stryker approved components and accessories unless otherwise specified. DO NOT modify any accessory to fit a handpiece. Contact your Stryker sales representative for a complete list of accessories. Failure to comply may result in patient and/or operating room staff injury.
- Always use the appropriate length of bur with the corresponding attachment. Failure to comply may result in patient and/or operating room staff injury.

"O"	"M"	"AM"	"R"	"RX"
Straight Attachment				
5100-10-20	5100-10-50	5100-10-70	5100-10-80	5100-10-90
Straight Irrigation Clip				
5100-10-520	5100-10-550	5100-10-570	---	---
Angled Attachment				
5100-10-22	5100-10-52	5100-10-72	---	---
Angled Irrigation Clip				
5100-10-522	5100-10-552	5100-10-572	---	---
Bur Series				
5110-X	5120-X	5130-X	5160-X	5190-X
	5220-X	5230-X	---	---

*Stryker Straight and Angled Attachments are marked with identifying letters "O", "M", "AM", "R" and "RX" and are similar in length and bur exposure to similarly identified Midas Rex® attachments.

Midas Rex® is a registered trademark of Midas Rex Pneumatic Tools, Inc. Stryker is in no way affiliated with Midas Rex Pneumatic Tools, Inc.

WARNINGS:

- DO NOT attempt to insert or remove any cutting accessory or attachment while the handpiece is operating. Failure to comply may result in operating room staff injury.
- Monitor heavy sideloads and/or long operating periods to prevent overheating of the distal tip and body of the handpiece. Failure to comply may result in patient and/or operating room staff injury.
- When operating the handpiece, DO NOT actuate the collar. Actuation may suddenly stop and/or overheat the handpiece. Failure to comply may result in patient and/or operating room staff injury.

Handpiece Collar Definitions:

LOAD: To install an attachment and bur, rotate the collar to the LOAD position (figure 1). You do not have to remove the attachment to replace a bur.

RUN: To operate the handpiece with the bur and attachment locked into the handpiece, rotate the collar to the RUN position.

EJECT: To release the attachment from the handpiece, rotate the collar to the EJECT position. When the attachment is released, the collar snaps back to the LOAD position.

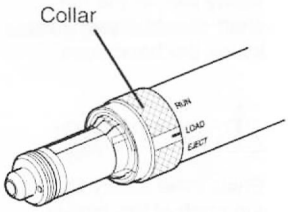

Figure 1.
Handpiece Collar

Straight Attachments

To install an attachment and a cutting accessory:

1. Rotate the collar to align the marker with the LOAD position.
2. Place the attachment over the handpiece; firmly push and twist the attachment onto the handpiece until it seats (figure 2).
3. Gently tug the attachment to ensure that it is properly seated.
4. Insert the bur into the attachment with a twisting motion (figure 3). The safety line on the bur shaft should disappear inside the handpiece.

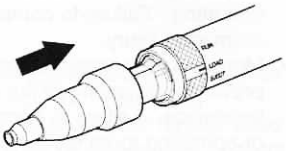

Figure 2.
Install Attachment

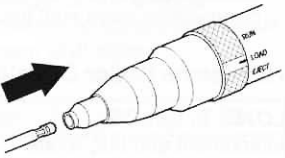

Figure 3.
Install Cutting Accessory

WARNING:

Ensure the safety line on the shaft of the bur is hidden within the handpiece to verify the bur is properly seated. If the safety line is visible, the bur may disengage, bend, and/or eject while in use. Failure to comply may result in patient and/or operating room staff injury.

5. Rotate the collar to align the marker with the RUN position.
6. Gently tug the bur to ensure that it is secure in the attachment.

Straight Attachments (cont'd)

To remove the cutting accessory and attachment:

1. Rotate the collar to align the marker with the EJECT position.
2. Remove the bur from the attachment.
3. Remove the attachment from the handpiece (figure 4).

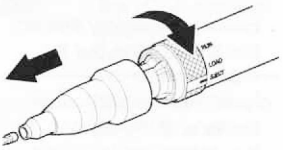

Figure 4.
Remove Cutting Accessory and Attachment

NOTE: Hold the handpiece with both hands while using the "R" or "RX" attachments.

Angled Attachments

To install an attachment and a cutting accessory:

1. Rotate the handpiece collar to align the marker with the LOAD position.
2. Place the attachment in the desired orientation over the handpiece; firmly push and twist the attachment onto the handpiece until it seats (figure 5).
3. Gently tug the attachment to ensure that it is properly seated.
4. Rotate the handpiece collar to align the marker with the RUN position.
5. Rotate the attachment's locking ring in the LOAD direction until the ring snaps into place.
6. Insert the bur into the attachment until it bottoms (figure 6). The safety line on the bur shaft should disappear inside the handpiece.

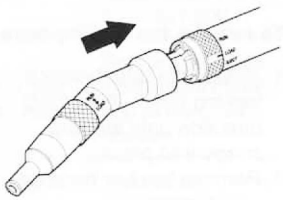

Figure 5.
Install Attachment

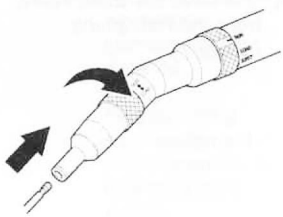

Figure 6.
Install Cutting Accessory

WARNING:

Ensure the safety line on the shaft of the bur is hidden within the handpiece to verify the bur is properly seated. If the safety line is visible, the bur may disengage, bend, and/or eject while in use. Failure to comply may result in patient and/or operating room staff injury.

7. Rotate the attachment's locking ring in the RUN direction.
8. Gently tug the bur to ensure that it is secure in the attachment.

To remove the cutting accessory and attachment:

1. Rotate the attachment's locking ring in the LOAD direction until the ring snaps into place.
2. Remove the bur from the attachment.
3. Rotate the handpiece collar to align the marker with the EJECT position.
4. Remove the attachment from the handpiece (figure 7).

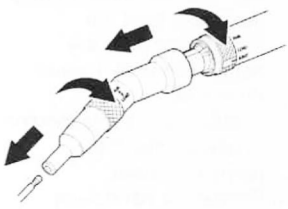

Figure 7.
Remove Cutting Accessory and Attachment

Troubleshooting Guidelines*

PROBLEM	CAUSE	SOLUTION
Attachment will not seat into the handpiece.	Handpiece collar is not in the LOAD position.	Rotate the collar to the LOAD position; seat the attachment.
Handpiece will not operate.	Handpiece collar is not in the RUN position.	Rotate the collar to the RUN position.
	If using an Angled Attachment, the lock ring is not in the RUN position.	Rotate the Angled Attachment's lock ring to the RUN position.
Attachment does not release from the handpiece when the collar is rotated to the EJECT position.	Debris has buildup between the attachment and the handpiece.	Clean debris from the inside of the attachment and the front of the handpiece. Lubricate with Stryker TPS Lubricant REF 5110-901-900.
Bur does not release from the Angled Attachment.	Angled Attachment's lock ring is in the RUN position.	Rotate the Angled Attachment's lock ring to the LOAD position.
Sporadic electrical interference is experienced.	Electrical noise is present.	Turn off all electrical equipment not in use in the operating room. Relocate electrical equipment; increase spatial distance. Plug operating room equipment into different operating room outlets.

*This handpiece is not field repairable. In case of operating difficulties, return this handpiece to Stryker Instruments for repair. For more information, contact your Stryker sales representative or Customer Service at 1-800-253-3210. Outside the USA, contact your nearest Stryker subsidiary.

Specifications*

Model:	U-Drill REF 5400-100
Size:	5.2 in [132 mm] length 0.84 in [21 mm] diameter
Weight:	0.33 lbs. [0.15 kg]
Speed:	75,000 RPM
Approval:	CE 0197
Duty Cycle:**	
Cycle Time:	20 seconds on/ 20 seconds off
Cycle Frequency:	10 times
Break Between Cycles:	30 minutes
Equipment Type:	Type BF Applied Part
Enclosure Protection:	IPXO Ordinary Equipment

Environmental Conditions:	**Operation**	**Storage and Transportation**
Temperature:	10 – 40°C	-20 – 40°C
Relative Humidity:	30 – 75%	10 – 75%
Atmospheric Pressure:	700 – 1060 *hPa*	500 – 1060 *hPa*

*Specifications listed are approximate and may vary slightly from unit to unit.

**This duty cycle is recommended when the handpiece is used in an operating room with an ambient temperature of 80°F (27°C) or less.

Euro. equiv. 5400-100-713 Rev-
Japanese equiv. 5400-100-720 Rev-
N. Euro. equiv. 5400-100-730 Rev-
Polish equiv. 5400-100-750 Rev-

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